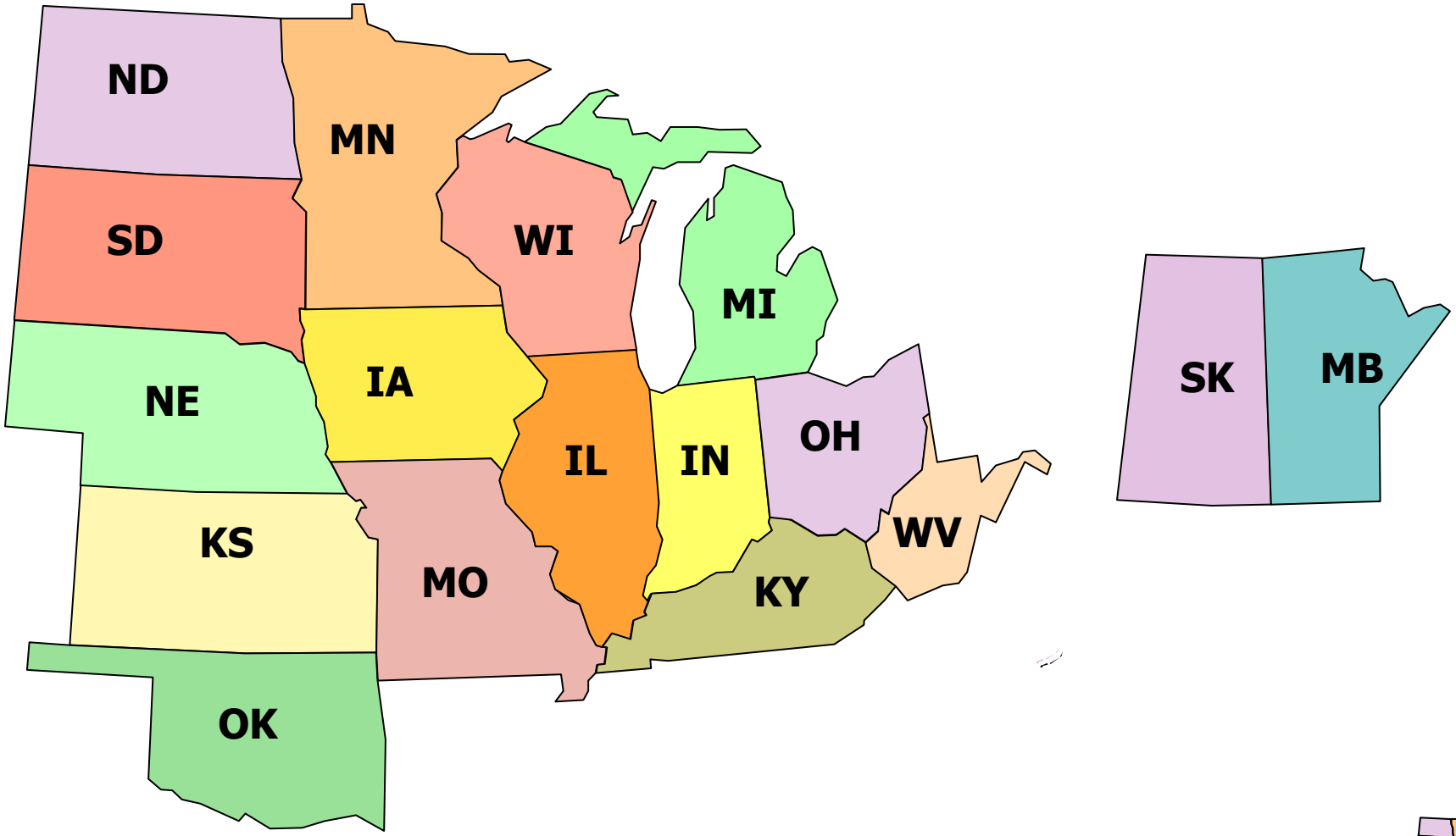
MIDWEST ENERGY INFRASTRUCTURE CONFERENCE

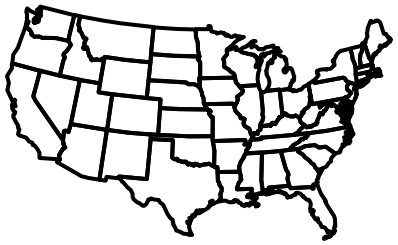
Jeff Wright

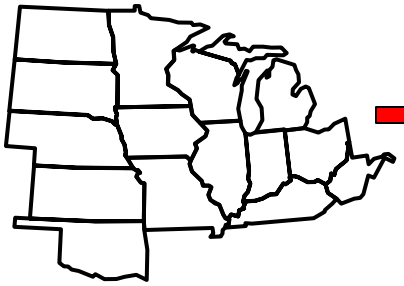
NOVEMBER 13, 2002 *CHICAGO, ILLINOIS*

MIDWEST US, MANITOBA, SASKATCHEWAN



US V. MIDWEST GROWTH COMPARISON 1990 and 2000





	Population	Real GSP	Energy Use*
	⬆12.9%	⬆40.5%	⬆13.9%
	⬆7.7%	⬆37.3%	⬆13.6%
	74 million people	2.6 trillion dollars	26.8 quads

Source: US Census Bureau, Bureau of Economic Analysis, EIA

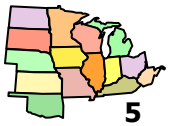
* Energy use data compares 1990 to 1999.

US Regional Comparison

	Midwest	Northeast	Southeast	West	ERCOT
Generation Capacity (000s of MW) (2001)	255	128	227	143	71
Net Generation (GWh) (2001)	1,152,529	546,511	987,273	638,746	278,226
Consumption (GWh) (2000)	973,000	545,000	955,000	615,000	318,000 (total Texas)
Population (in millions) (2000)	74	60	63	61	21
Per Capita Consumption (KWh)	13,198	9,053	15,063	10,017	15,263

Source: EIA Electric Sales and Revenue 2000, Table 6; US Census Bureau, Population Unrevised April 1, 2000; and NERC, Historical Demand and Capacity, 2001 Report.

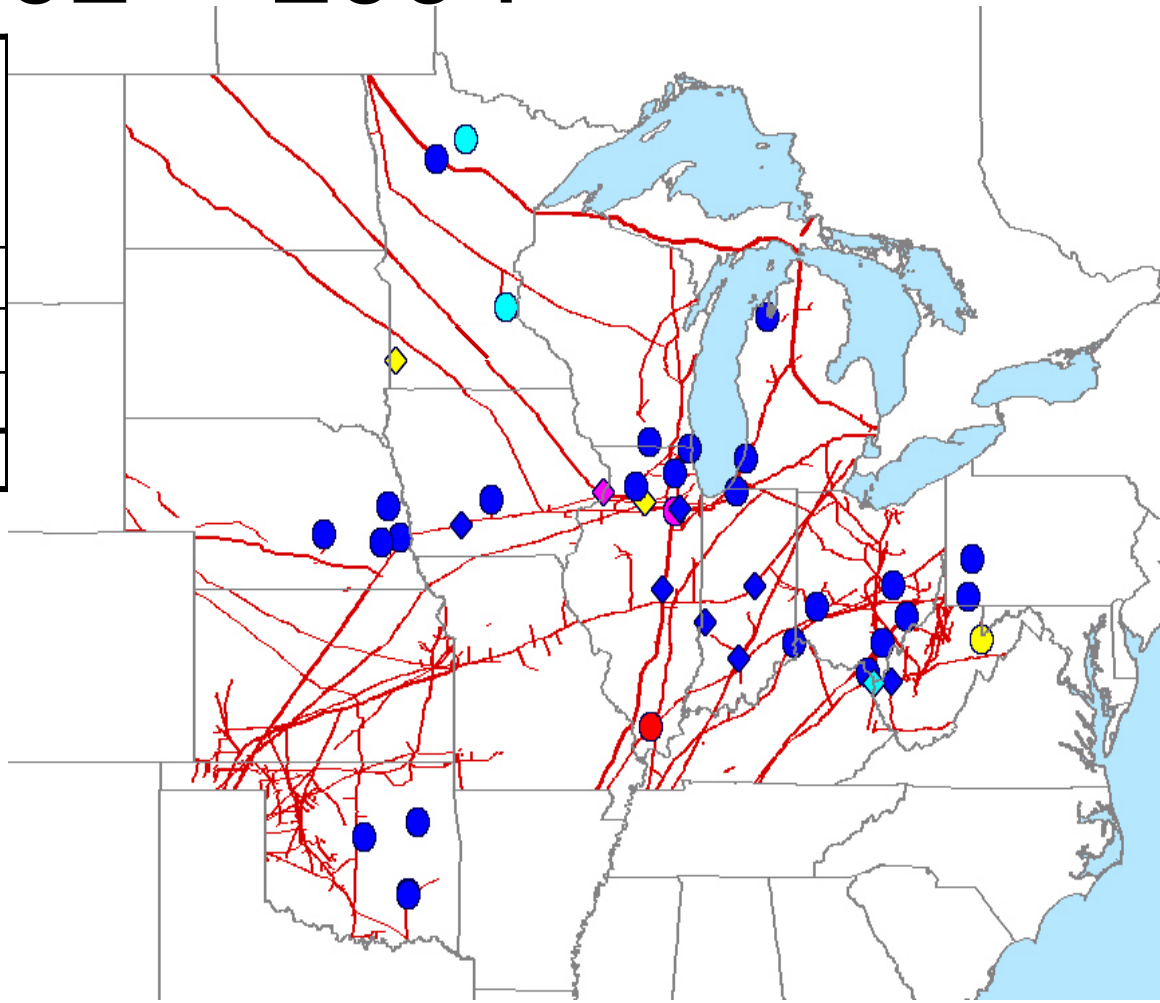
ELECTRIC INFRASTRUCTURE



Planned Midwest Generation 2002 – 2004

Year	Proposed Gas-Fired Generation in MW (Under Construction and Advance Development)	Related Gas Demand (MMcf/d)
2002	14,645	1,163
2003	14,748	1,171
2004	4,288	340
Total	33,681	2,674

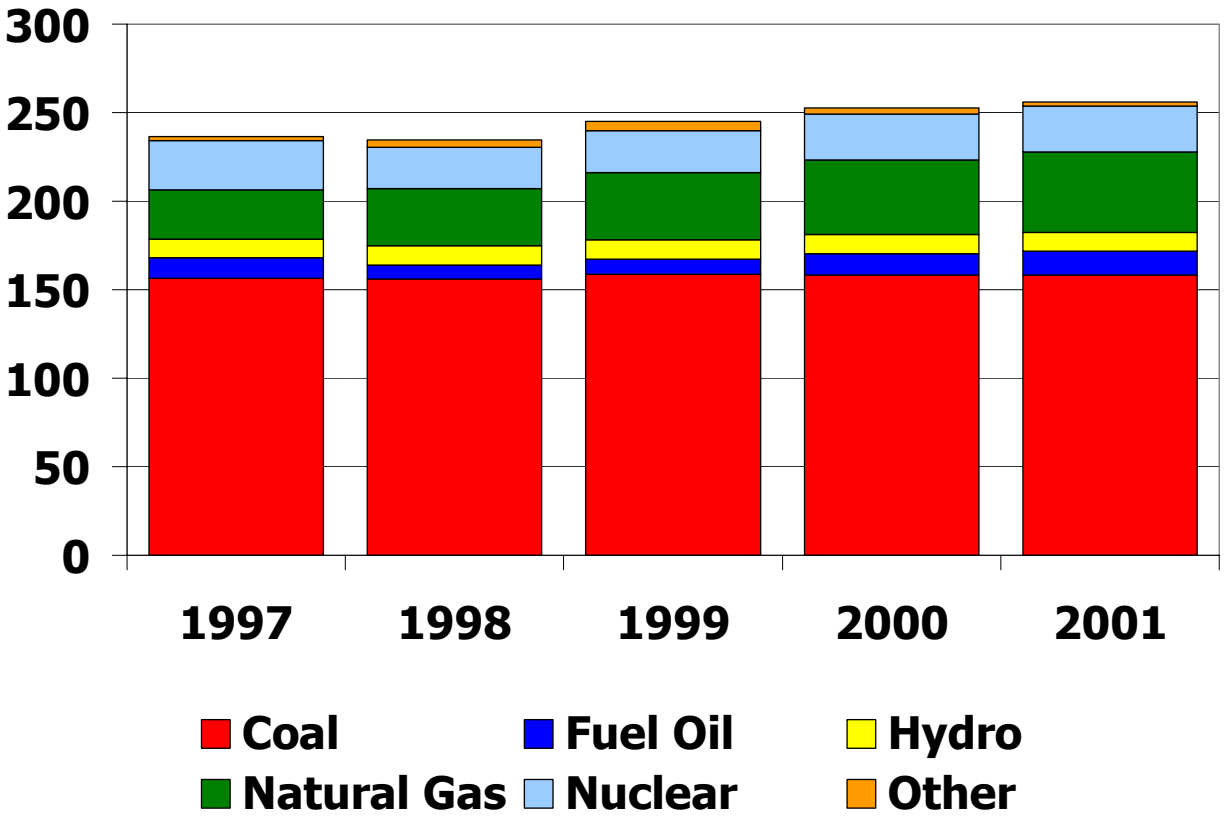
- Advanced Development
- Under Construction
- Coal
- Natural Gas
- Uranium
- Wind
- Wood



Source: RDI's Powermap and NewGen (July 2002 data)

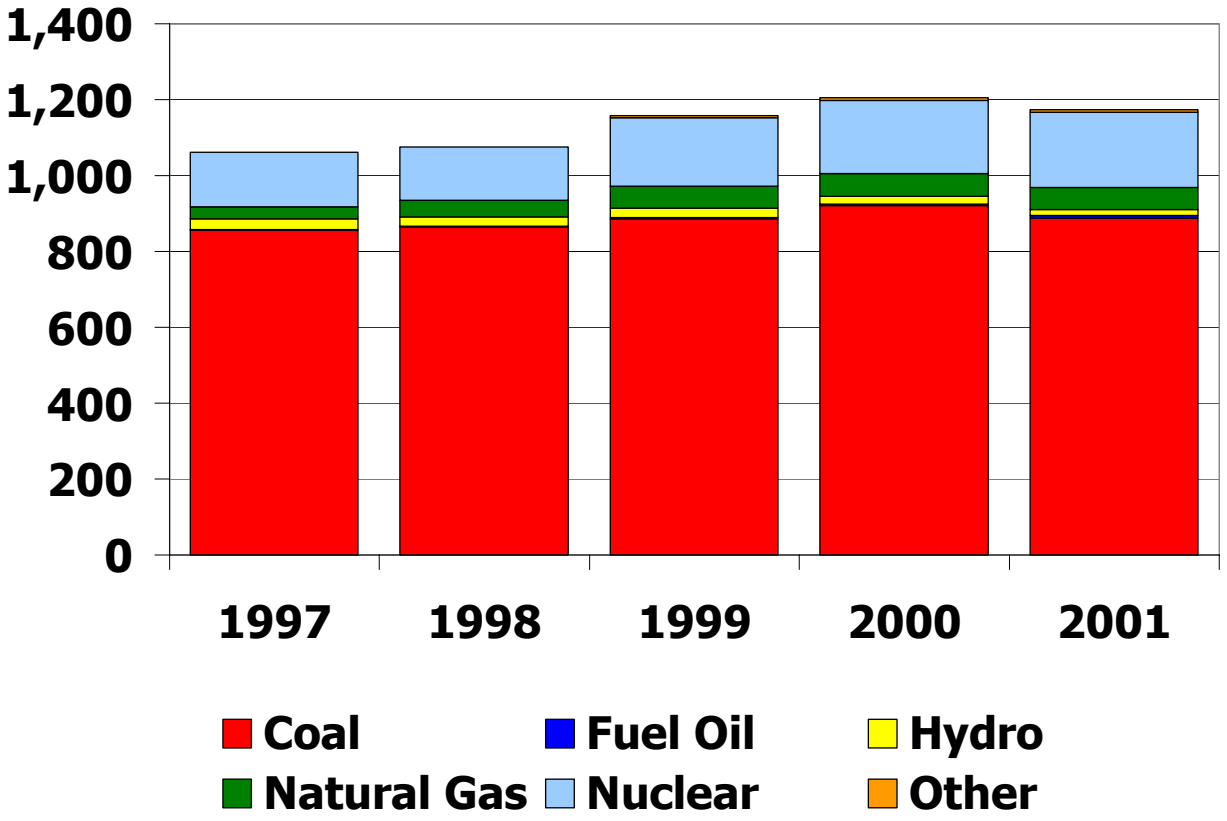
Midwest Generation Capacity (in thousands of MW)

Midwest generation capacity increased by 8% between 1997 and 2001, primarily from gas-fired generation.



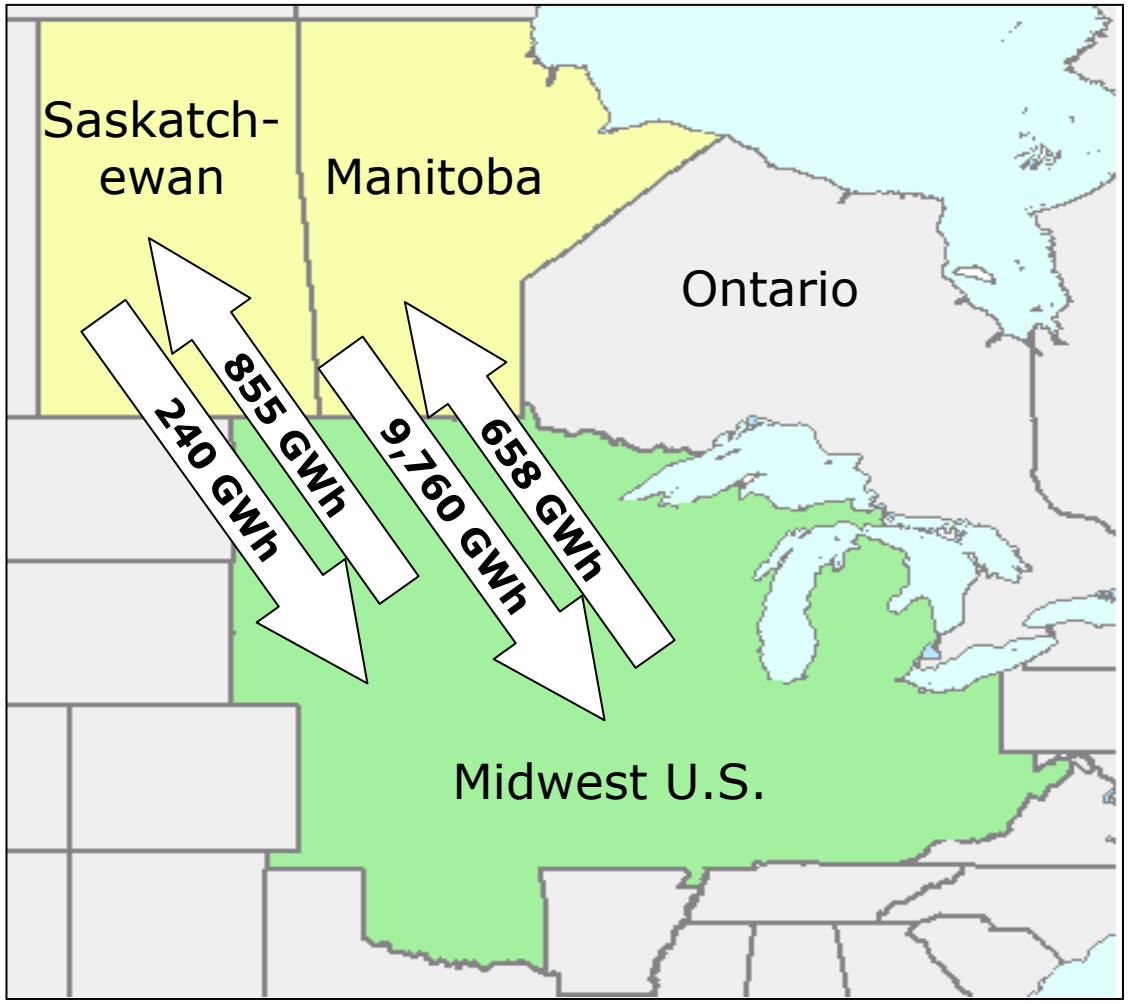
Midwest Net Generation (in millions of MWh)

Midwest generation output increased by 10.5% between 1997 and 2001, to almost 1.2 billion GWh.



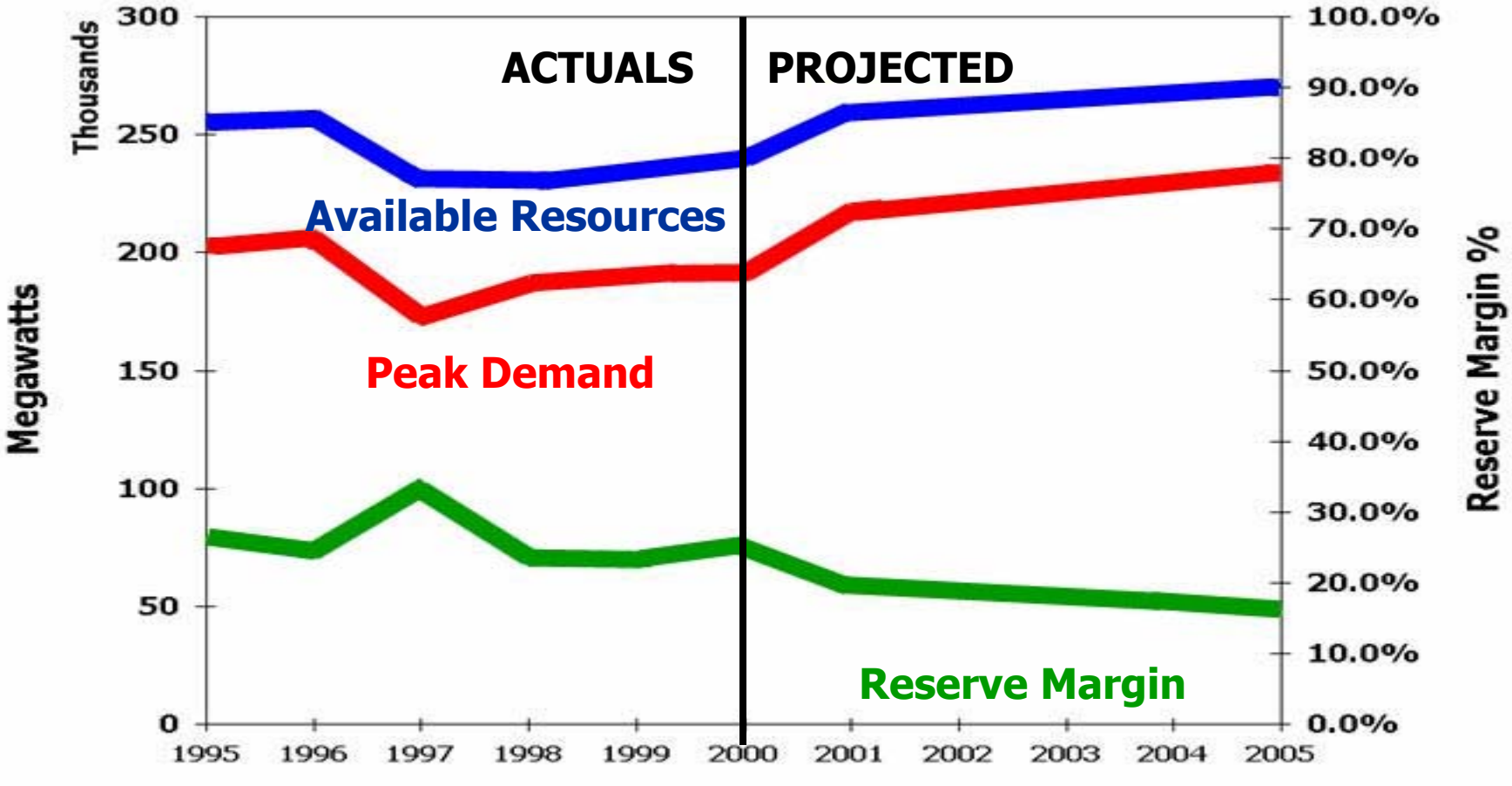
Electricity Imports

In 2001, the Midwest had net imports of 8,487 GWh from Canada. This was 38% of total net imports from Canada.

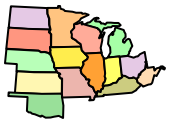


Source: National Energy Board, Canada, Detailed Monthly Statistics – Imports and Exports of Electricity, Tables 2A and 2B.

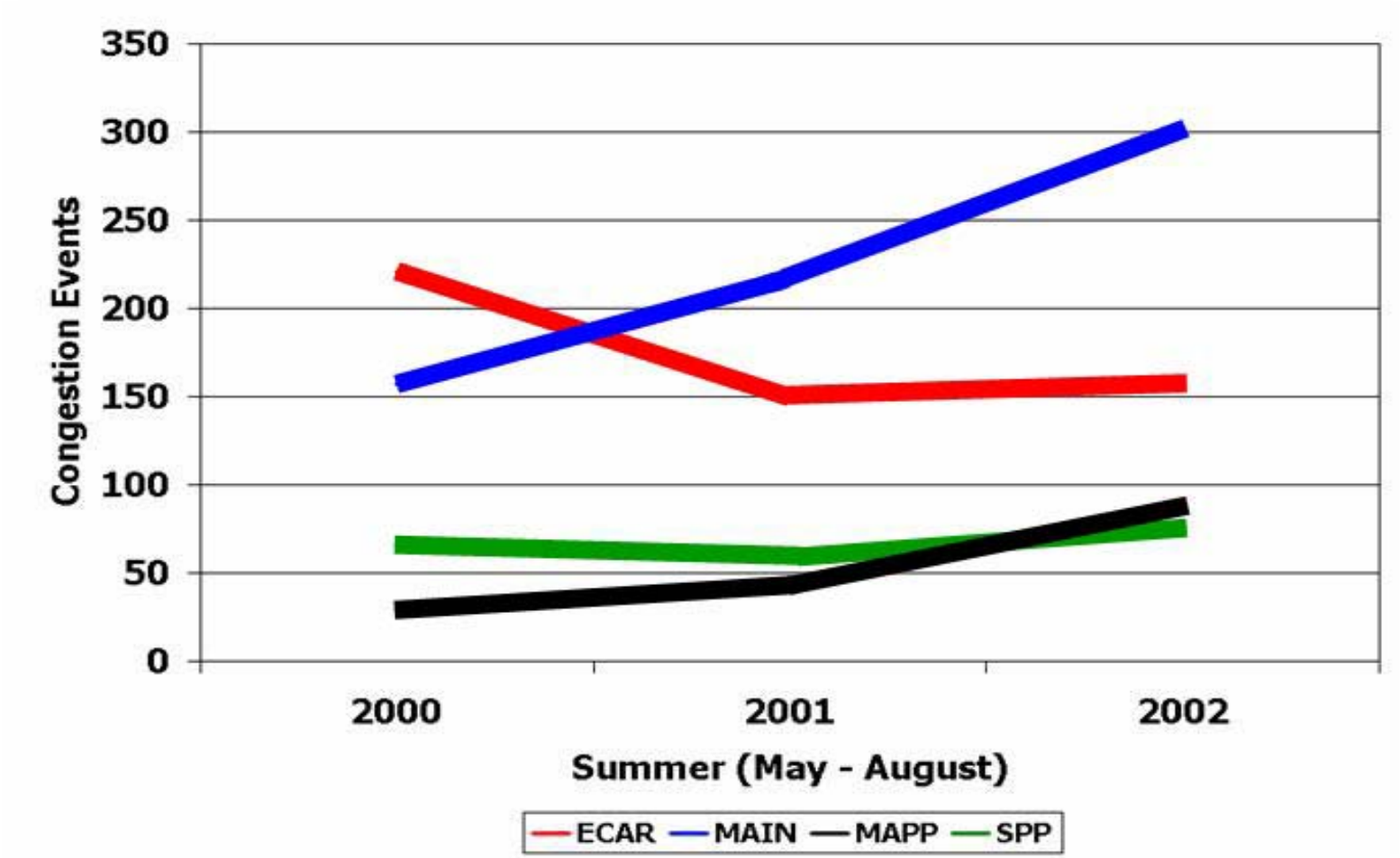
Healthy Reserve Margin in the Midwest



Source: NERC, Historic Capacity and Demand, 2001 Report



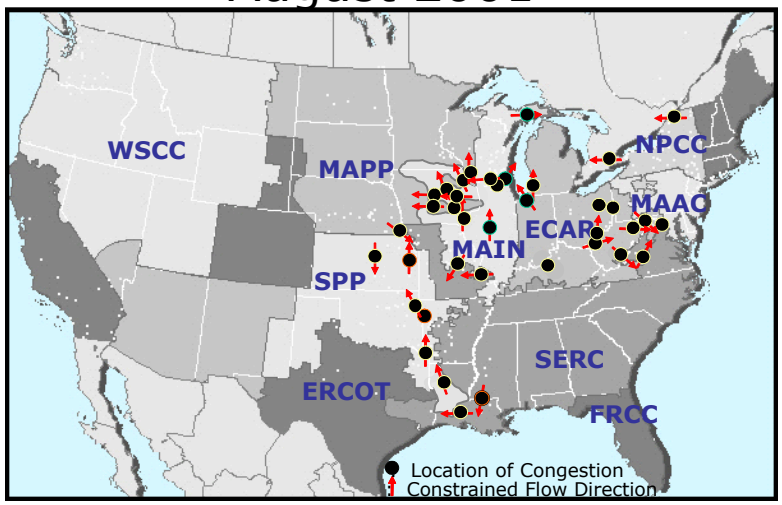
Congestion in Midwest has been increasing over the past year.



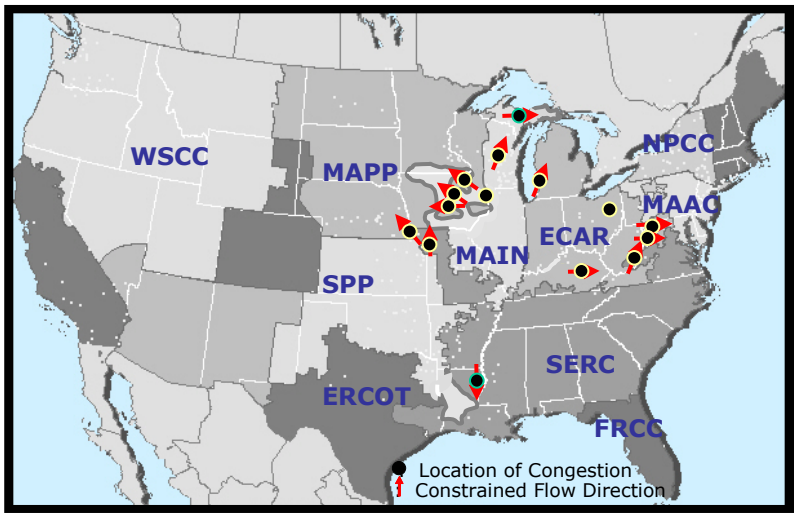
Source: NERC Central Repository for Security Events (TLR Procedures 2C and Higher)

Congestion Location & Impacts Can Vary With Season and Time of Day.

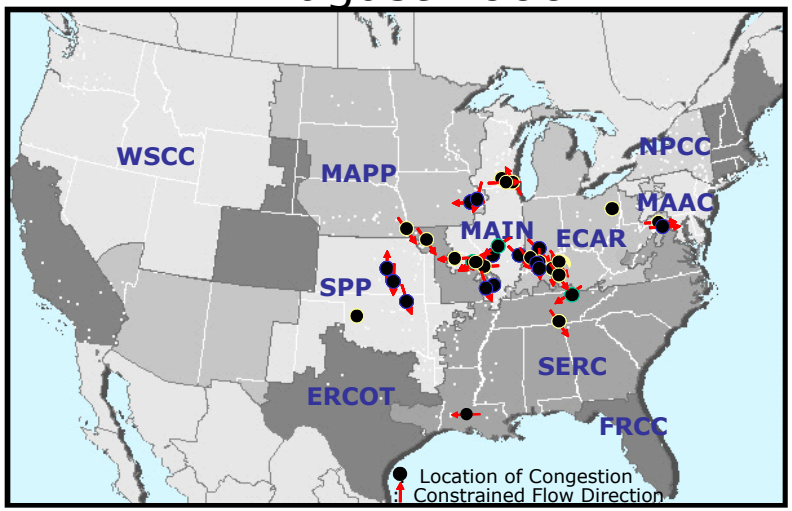
August 2001



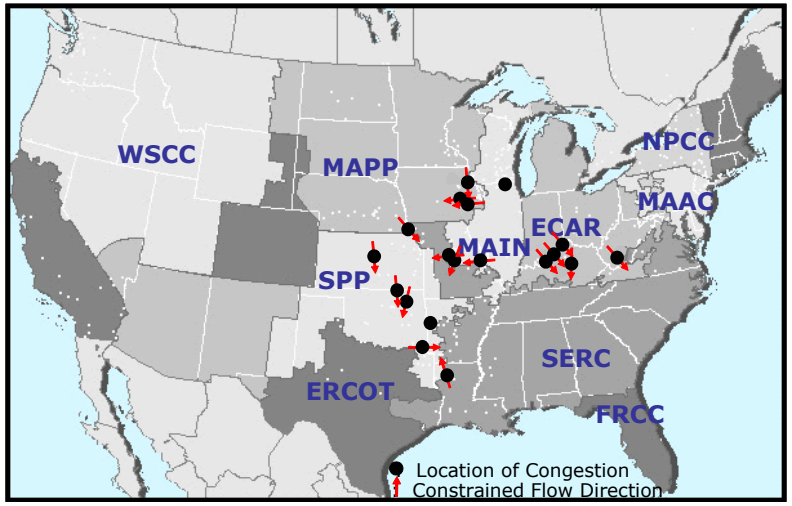
December 2001



August 2000



December 2000



FERC

Source: NERC Central Repository for Security Events (TLR Procedures 2C and Higher) and FriedWire, Inc.

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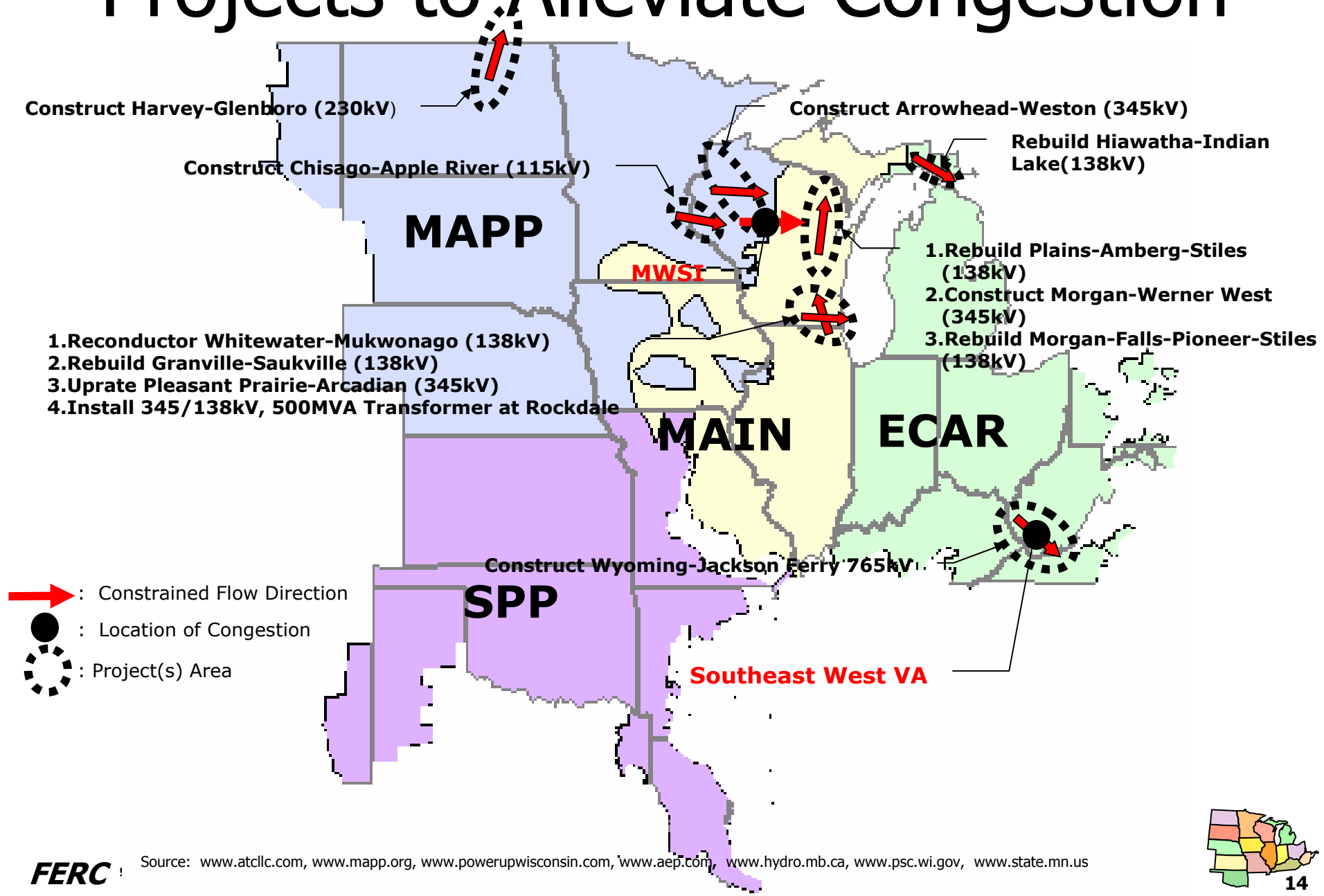
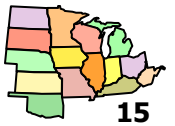
Projects to Alleviate Congestion



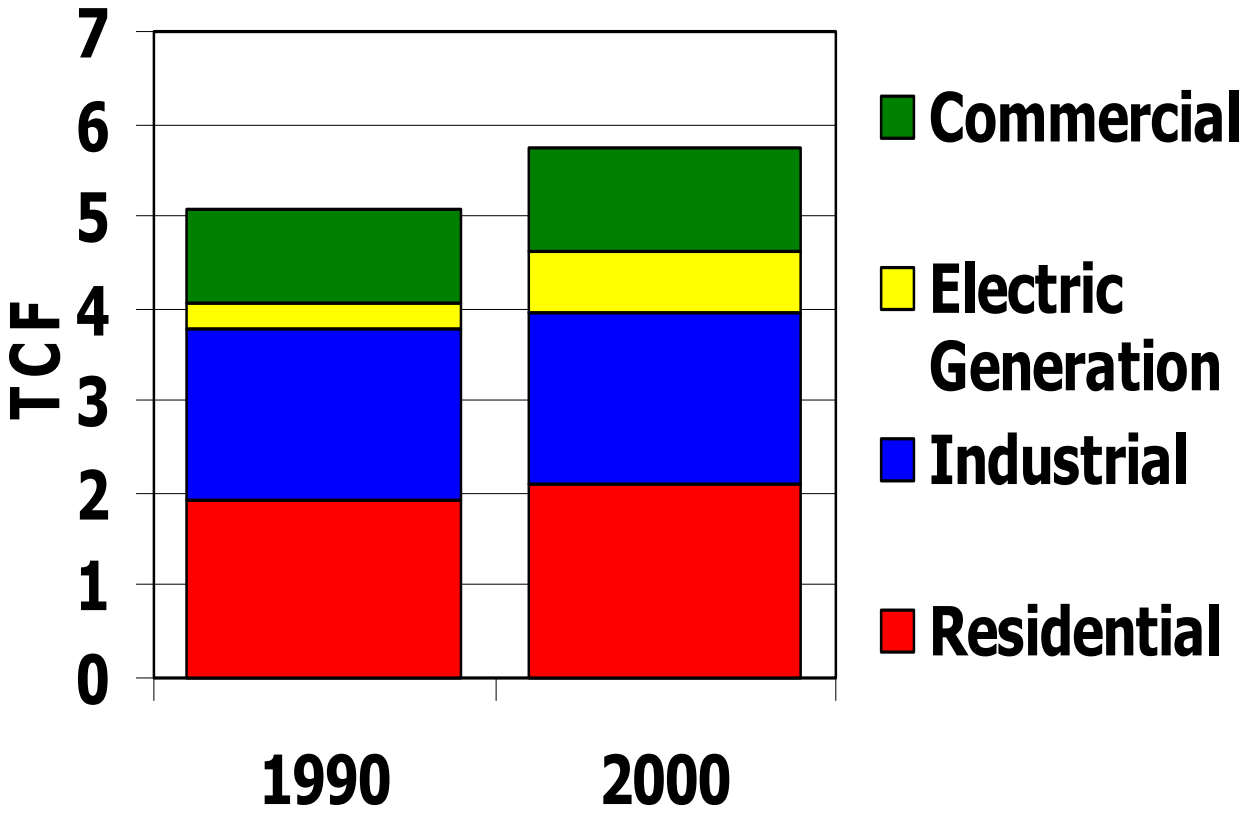
Source: www.atcllc.com, www.mapp.org, www.powerupwisconsin.com, www.aep.com, www.hydro.mb.ca, www.psc.wi.gov, www.state.mn.us

GAS INFRASTRUCTURE



Gas Consumption in the Midwest

Since 1990, the electric generation sector has had the largest growth in gas consumption since 1990.



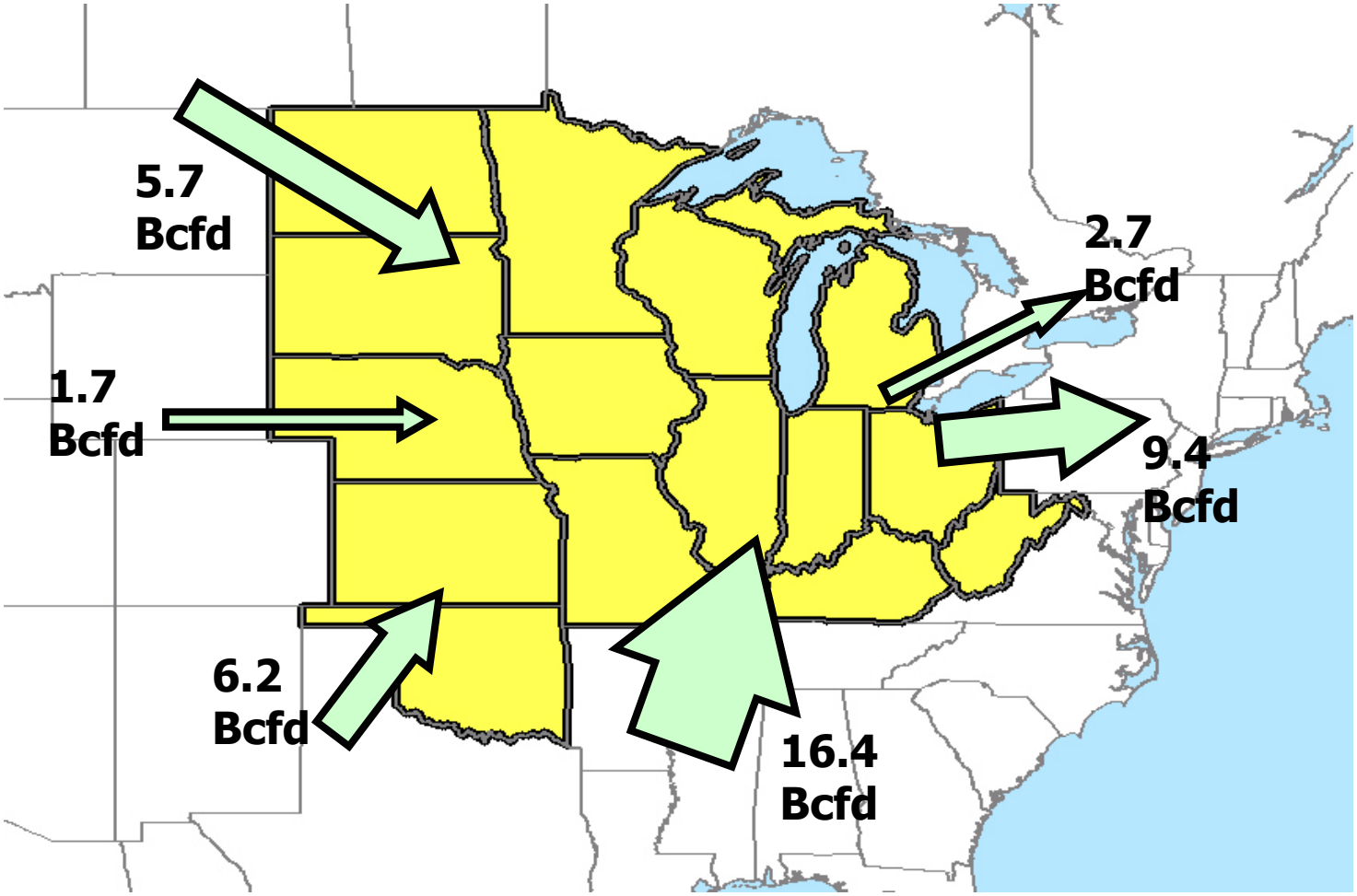
Source: EIA

The Midwest is dependent on (1) production from gas originating from the West, Southeast, Northeast, OK and KS, and Canada, and (2) storage.

Midwest Gas Facts - 2000	United States	Midwest	% of United States
Total Gas Consumption	22.83 Tcf	5.8 Tcf	25%
Total Gas Production	18.99 Tcf	2.78 Tcf	15%
Total Gas Reserves	177.4 Tcf	28.0 Tcf	16%
Total Storage Capacity	8.2 Tcf	4.7 Tcf	56%
Net Imports from Canada	3.47 Tcf	1.27 Tcf	37%

Source: EIA

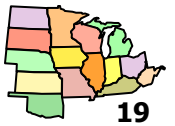
Midwest Pipeline Capacity 2000



Source: Energy and Environmental Analysis, Inc.

Future projects will create new capacity to serve new electric generation loads and to deliver gas from producing areas.

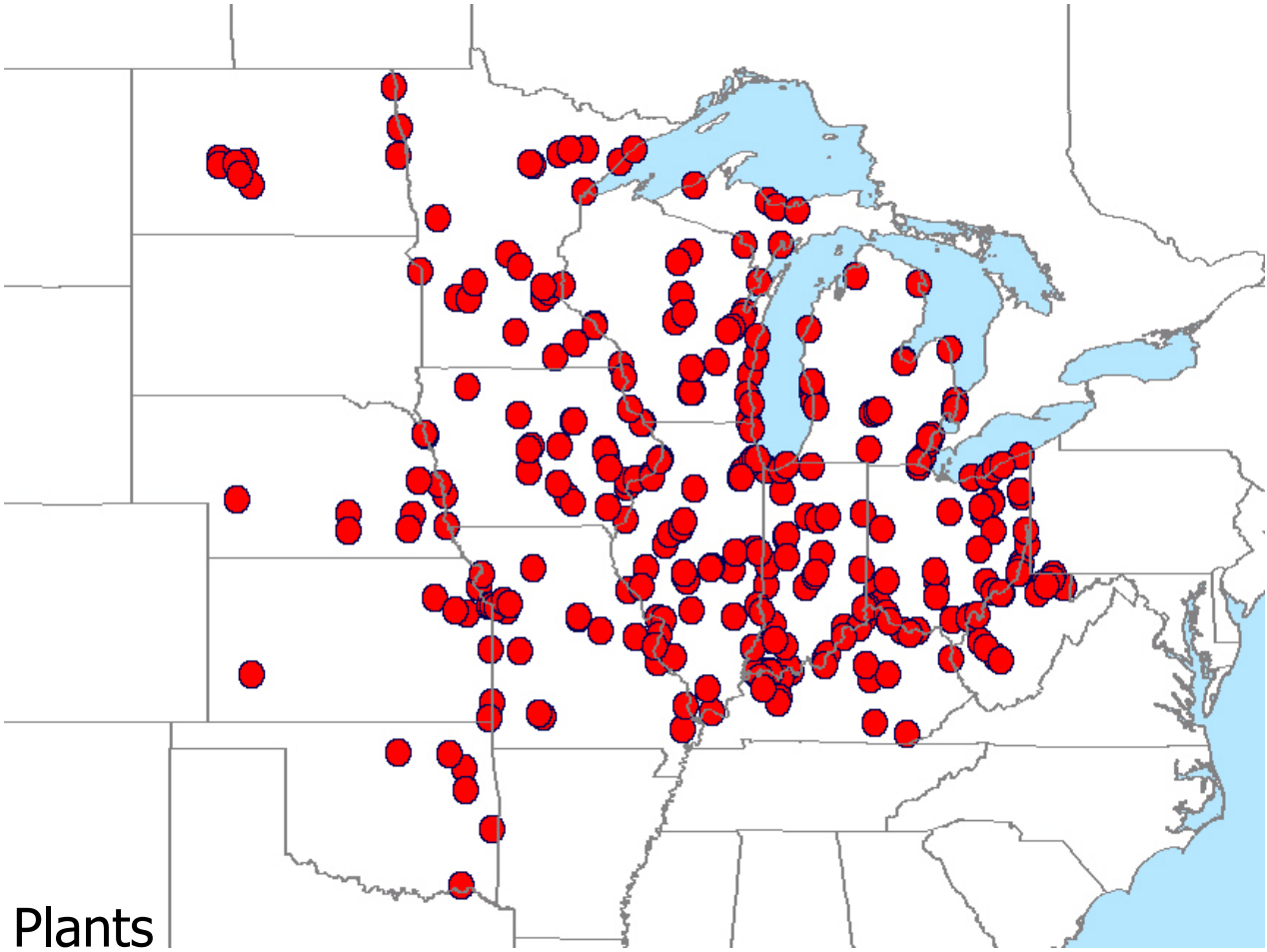
- Five major projects were certificated, from 2001 to the present time, adding 1,914 MMcf/d of new capacity.
- Three major projects are pending before the Commission with a projected capacity of 940 MMcf/d.
- Seven major projects are on the horizon with the potential capacity of 6,729 MMcf/d of transmission and 480 MMcf/d of storage deliverability.



COAL AND FUEL OIL

Coal Dominates Midwest Generation

Coal accounted for over 61% of generation capacity and over 75% of the net generation in 2001.

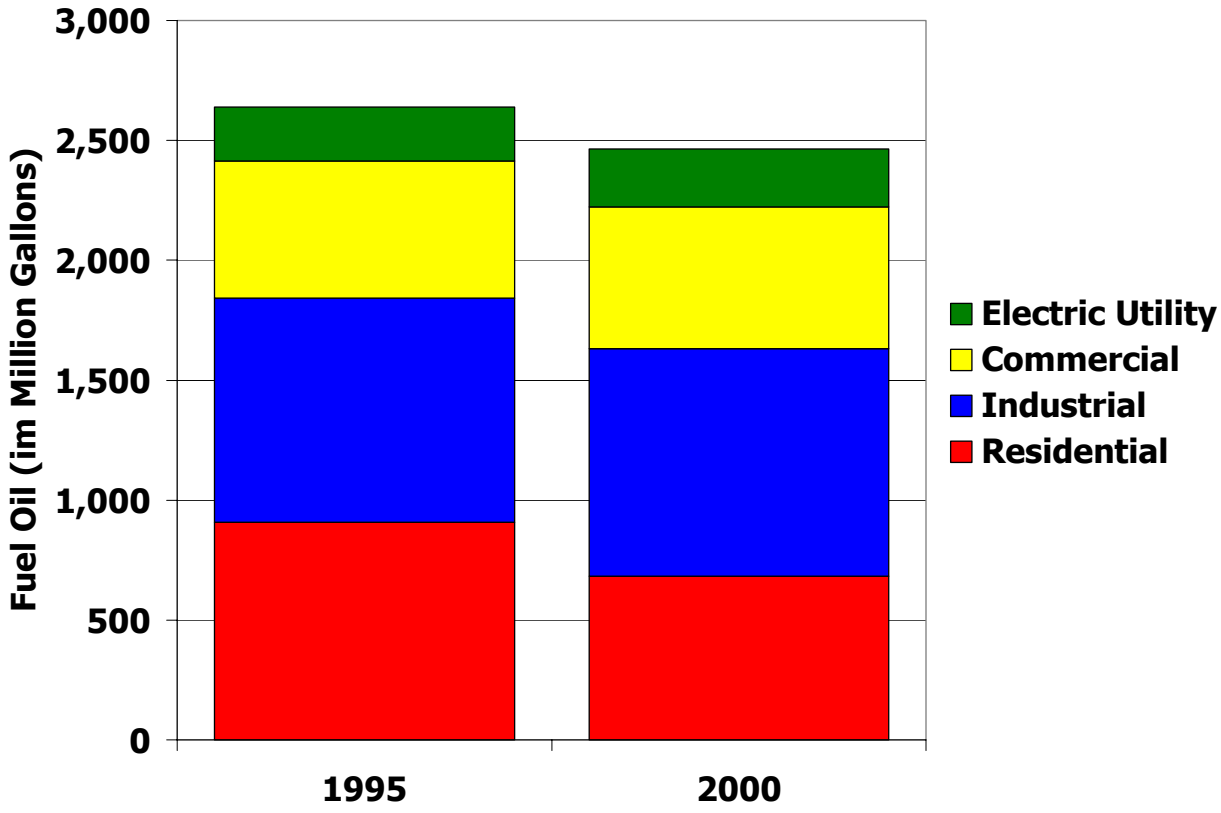


● Coal-fired Generation Plants

Source: POWERdat

Fuel Oil Consumption by Sector

Electric utilities use of fuel oil accounted for almost 10% of total fuel oil consumed in 2000 in the Midwest.



Source: EIA's Fuel Oil and Kerosene Sales 1995-2000, Tables 7 through 10

SUMMARY
Near-term Outlook

- Adequate pipeline and storage capacity.
- Adequate electric generation capacity.
- Electric transmission is the weak component of the Midwest's energy infrastructure.